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AMSAT NEWS SERVICE
ANS 209

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

SB SAT @ AMSAT $ANS-209.01
SPACE SYMPOSIUM CALL FOR PAPERS

AMSAT NEWS SERVICE BULLETIN 209.01 FROM AMSAT HQ
SILVER SPRING, MD, June 09, 2002
TO All RADIO AMATEURS
BID: $ANS-209.01

ANS is pleased to announce the 20th Space Symposium and AMSAT-NA Annual meeting, scheduled for November 7-11. 2002 in Fort Worth, Texas.

The event will chronicle recent and future Amateur Radio satellite technology developments, including an electronic Surplus Stores tour on November 7th; a Field Operations breakfast and a tour of the Lockheed Martin Aeronautics Company on November 10th; and the AMSAT-NA Board of Directors Meeting on November 10th and 11th.

This is the Third "Call for Papers" to be Presented during the 2002 Symposium. Papers may be presented by the author during the Symposium, or simply offered for inclusion in the Symposium Proceedings publication. The subject matter should be of general interest to Amateur Radio Operators involved in satellite communications. Suggested topics include; operating techniques, antenna design and construction, spacecraft design and construction, current mission status, proposed satellite missions, telemetry acquisition and relay, satellite microwave projects, etc.

A brief abstract of the proposed paper (in outline format) should be submitted as soon as possible. The final date for abstracts is July 25th, 2002. Copy ready papers must be received no later than August 26th 2002. Electronic submittal is preferred. The format must be either MS word compatible or in plain text.

Please e-mail your electronic submittals to:Doug Howard at:
<douglas.s.howard@lmco.com>

It appears that there is a problem with the registration form for the AMSAT Annual Meeting. If you fax the form to the AMSAT office, please do NOT use the boxes for your Visa or MasterCard number. The shaded areas do not show up on the fax. Instead, drop right below the boxes and write the number there. Thanks so much - Martha

[ANS thanks Keith Pugh, W5IU, the 2002 event chairman]

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SB SAT @ AMSAT $ANS-209.02
AMSAT-DL ANNOUNCES P3-E AND P5-A

AMSAT NEWS SERVICE BULLETIN 209.02 FROM AMSAT HQ
SILVER SPRING, MD. July 28, 2002
TO ALL RADIO AMATEURS
BID: $ANS-209.02

AMSAT-DL announces formal go-ahead
for space missions
"Phase 3-E" and "Phase 5-A"

In July 2002 the AMSAT-DL (Germany) board of directors gave its official green light to develop and build the two spacecrafts AMSAT-Phase 3-E (P3E) and AMSAT-Phase 5-A (P5A). The high acceptance of the mission goals of these two projects expressed in the recent AMSAT-DL member's survey was the final element to arrive at this decision. Both satellites will be created in a common development process by an international team under the leadership of AMSAT-DL. The P3E satellite is to be launched as communication and scientific platform into a highly elliptical orbit around Earth. The second project with the working name "AMSAT-Phase 5-A" is destined to enter an orbit around the planet Mars. This spacecraft will then transmit scientific data to Earth - data from experiments on-board P5A as well as - via its repeater function - from experiments on the Martian surface or the planet's atmosphere.

So far three successful Phase 3 satellites were launched under the leadership of AMSAT-DL. The latest satellite of this series, P3D (now operational as AMSAT-OSCAR 40), was launched in 2000 and demonstrated sufficient bus and propulsion capabilities for a flight to Mars. So AMSAT-DL started a closer investigation into the possibility of such a mission. Based on the existing experience base and the overwhelming interest during the AMSAT-DL International Satellite-Workshop last year, the P5A spacecraft will not only carry scientific experiments, but also subpayloads to be released in direction to the Martian surface. Suitable launch windows to Mars exist in the years 2007 and 2009.

Two or three years earlier P3-E to be launched in an orbit around Earth is expected to continue the successful series of AMSAT-Phase 3 satellites. The main task of P3E is to serve as communication platform for the nearly 2 million radio amateurs worldwide. They constitute a network for further exploration of the so called "uncoordinated multiple access", to provide simultaneous and freely available service to a large number of groundstations. Using existing technology and implementing the results of the member's survey, several transponders on frequencies between 145 MHz and 10 GHz are planned for P3E. Details will be fixed in a design and payload meeting in the second half of 2002. Additionally the P3-E spacecraft will be an important test bed for some technology needed for the Mars mission. Work on the P3-bus has been started and a number of modules are already under construction.

So far all AMSAT-DL satellite missions in 1980, 83, 88 and 2000 were launched with ARIANE-launchers from French Guyana into geostationary transfer orbits. The excellent co-operation between Arianespace (with its current ARIANE-5-launch-system) and AMSAT-DL resulted in the development of various arrangements for the launch of secondary payloads on-board of ARIANE-launches. Thus Arianespace will be the first obvious choice for the launches of P3E and P5A.

Peter Gulzow, DB2OS, President AMSAT-DL
Frank Sperber, DL6DBN, Vice President AMSAT-DL

Prof. Dr. Karl Meinzer, DJ4ZC, Projectleader

First background information about both missions can be found at:

http://www.amsat-dl.org/p3e/towards-p3e.pdf
http://www.amsat-dl.org/p5a/p5a-to-mars.pdf

[ANS thanks AMSAT-DL for the above information.]

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SB SAT @ AMSAT $ANS-209.03
CQ MAGAZINE FILES COMMENTS ON NEW BAND PROPOSALS

AMSAT NEWS SERVICE BULLETIN 209.03 FROM AMSAT HQ
SILVER SPRING, MD. July 28, 2002
TO ALL RADIO AMATEURS
BID: $ANS-209.03

Rich Moseson, editor of CQ Magazine, told ANS that CQ Communications Inc., publisher of "CQ Amateur Radio," "CQ VHF" and "Popular Communications" magazines, has filed comments with the FCC supporting the allocation of 2400-2402 MHz as a primary allocation for the Amateur Satellite Service, protecting current and future satellite usage.

In the matter of ET Docket No. 02-98, RM-9949, CQ told the FCC, "We fully support the Commission's proposal to upgrade the existing amateur allocation at 2400-2402 MHz to primary, and to add a primary allocation in the same segment for the Amateur Satellite Service."

Citing the fact that there are currently five amateur satellites using the 2400-2402 MHz band segment and that future satellites will likely use the same band, CQ called upon the FCC to "protect the Amateur Satellite Service from incompatible sharing partners and unintentional interference on uplinks to satellites with international coverage."

CQ's comments also "voiced significant concern that the FCC appears to be placing the interests of unlicensed services on a par with, if not ahead of, those of licensed services." The unlicensed services include cordless telephones and wireless computer networks which have begun to operate on 2 GHz. CQ asked the Commission "to reaffirm its long-standing policy that the interests of licensed operators/services are primary on any frequencies shared by licensed and non-licensed users."

CQ called for the FCC to adopt its proposal to create a "splinter band" at 135.7-137.8 kHz, giving amateur radio its first allocation above 200 meters in nearly a century. The company proposed opening the band to all amateurs with General Class or higher licenses, not imposing mode restrictions and making technical requirements flexible enough to encourage a wide range of experimentation. CQ also strongly supported the creation of a new ham band at 60 meters (5,250-5,400 kHz), proposing that full amateur power be permitted; that there be no sub-banding, either by mode or by license class; and that the band be open to all amateurs with HF privileges, including CW privileges for those holding Novice Class licenses or Technician licenses with code credit.

CQ's comments were filed electronically and may be viewed in full on the FCC's Electronic Comment Filing System (EFCS) website (http://www.fcc.gov/e-file/ecfs.html) by selecting "Search for Filed Comments," then typing in "02-98" under "Proceeding" on the search page, scrolling through comment summaries until the CQ comments are reached.

[ANS thanks Rich Moseson W2VU and CQ Magazine for the above information.
Rich's e-mail is cq@cq-amateur-radio.com]

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SB SAT @ AMSAT $ANS-209.04
UO-11 TELEMETRY ARCHIVE ON-LINE

AMSAT News Service Bulletin 209.04 From AMSAT HQ
SILVER SPRING, MD. JULY 28, 2002
To All RADIO AMATEURS
BID: $ANS-209.04

Some time ago, Joe VK/G3ZCZ suggested that a telemetry archive for OSCAR-11 would be useful, especially for educational projects.

Clive has now started this archive on his website. Initially it will be just for the current year, and 2001. He will add other years as time permits.

Telemetry from 1993 to 2000 should be relatively easy to archive, as he already has the data on disk. Data prior to 1993 will take a lot longer to archive, as he has to convert it from tape to disk. The early data is often of poor quality, and there are many long gaps where no recordings were made.

If anyone out there can provide any data, particularly for the 1984 to 1993 years, this would be most appreciated. Please e-mail CLive with details. However please DO NOT SEND ANY FILES, before futher discussion.

The purpose of the news archive is to provide an overview of the state of the OSCAR-11 satellite, at the times when the telemetry was captured.

The telemetry archive is at www.users.zetnet.co.uk/clivew/ Visit the OSCAR-11 page.

[ANS thanks Clive G3CWV for the above information.]

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SB SAT @ AMSAT $ANS-209.05
AO-27 RECOVERING NICELY

AMSAT NEWS SERVICE BULLETIN 209.05 FROM AMSAT HQ
SILVER SPRING, MD. July 28, 2002
To All RADIO AMATEURS
BID: $ANS-209.05

July 22, 2002 UTC
The batteries on AO-27 are starting to show a positive charge. The com-
mand team will be turning the automatic data downloads back on. Check the TEPR schedule for information on when the downloads are on. We still need people to monitor and download the telemetry. Visit the AO-27 web page and follow the links on telemetry (http://www.ao27.org/tlm.shtml).

[ANS thanks Mike N1JEZ for the above information.]

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SB SAT @ AMSAT $ANS-209.06

AO-40 CHAT ON-LINE

AMSAT NEWS SERVICE BULLETIN 209.06 FROM AMSAT HQ
SILVER SPRING, MD. July 28, 2002
To All RADIO AMATEURS
BID: $ANS-209.06

Alex HB9DRI has updated the AO40 Activity Report Logger with a new tool which runs online in a chat room format. He explains that you don't need to download any software, only connect to the web page and begin using it.

Some stations have tried to use the logger as a chat room. This is not the original purpose for the Logger. The new chat room should redirect any chat traffic, keeping the logger available for messages about DXpeditions, status reports, etc. Alex invites interested hams to use the AO40 CHAT ONLINE to receive, send and exchange short info in real time.

The web page is http://www.artieda.net/hb9dri/ao40logger . Alex says this page is a test period. He would appreciate any feedback to be sent to him at hb9dri@artieda.net .

[ANS thanks Alex HB9DRI for the above information.]

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SB SAT @ AMSAT $ANS-209.07
WLOGTRACKER SOFTWARE BETA IS AVAILABLE

AMSAT NEWS SERVICE BULLETIN 209.07 FROM AMSAT HQ
SILVER SPRING, MD. July 28, 2002
To All RADIO AMATEURS
BID: $ANS-209.07

Franco HB9OAB announced new software WlogTracker, a real-time satellite tracking program. This initial beta version is freeware. He mentions one of his goals is to compensate for a bug in WiSP which his testing shows he has accomplished. He describes his program as, "Little, simple and easy.... not a professional application... but working fine!" The exact position of every satellite in orbit is numerically shown to the operator.

He has made it available on his home page at http://www.wlog2000.com Select WLOGTRACKER.ZIP for download. You may also need to download VBRUN6SP5.EXE if it is not already on your computer.

The WlogTracker program performs realtime the calculation of 60 satellites using standard keplerian elements such as those on the celestrack site. WlogTracker has been verified with WIN95/98/ME and he would appreciate finding other users in order to verify the operation on WINDOWS XP or 2000.

Other features include ...
- Faster start
- Little file (20kb!!)
- 1024x768 screen or better only
- Full fast check for 60 SAT situation
- Check color on local footprint (numerical)
- 60 SAT data on a single realtime screen 1024/768 (numerical) for:
SATNAME AZ EL MA (it works well for AO40)
Height Range LON LAT ILL SQ RN
- Ascii file for config.txt
- Ascii file for LON/LAT/HEIGHT
- Ascii file for BLON/BLAT at sat name
- fast read kepler from AMSAT file (txt)

- fast read last update with simple click
- create amateur.txt update file directly from internet with last keps
- check ATOMIC time via internet fast (WlogAtomicClock)

[ANS thanks Franco HB9OAB for the above information.]

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SB SAT @ AMSAT $ANS-209.08
ASTRONAUT CITES ARISS VALUE IN SENATE TESTIMONY

AMSAT NEWS SERVICE BULLETIN 209.08 FROM AMSAT HQ
SILVER SPRING, MD. July 28, 2002
To All RADIO AMATEURS
BID: $ANS-209.08

International Space Station Expedition 2 crew member Jim Voss got in a few good words for Amateur Radio when he appeared June 19 before the US Senate Committee on Commerce, Science and Transportation. A retired US Army colonel, Voss cited the value of the Amateur Radio on the International Space Station (ARISS) program in helping to inform and educate youngsters about space exploration and life aboard the ISS as well as to demonstrate scientific principles. ARISS is an international project, with US participation by ARRL, AMSAT and NASA.

Voss said ARISS "offers the opportunity for students to experience the excitement of space flight by talking directly with crewmembers of the ISS via Amateur Radio." Voss also cited the enthusiastic comments of Allen White, WB4MIO, who helped to coordinate Voss' ARISS contact with Admiral Moorer Middle School in Alabama. "There is no way I can adequately describe the excitement this created in our school and community," White wrote in a letter to Voss. "I think this was the most exciting educational event of the year for these students."

Although not an amateur licensee, Voss participated in several ARISS school QSOs from the controls of NA1SS, the ARISS station, during his duty tour aboard the ISS. The other Expedition 2 crew members were Crew Commander Yury Usachev, RW3FU, and Susan Helms, KC7NHZ. The crew spent 167 days in space aboard what Voss called "a permanent orbiting classroom that brings education and research out of textbooks and into real life."

Voss said the in-flight education programs like ARISS "use the unique environment of space to inspire the next generation of explorers." Taking advantage of technological tools that include Amateur Radio, he concluded, "students are able to study and explore Earth from space, learn about life aboard an orbiting laboratory, and conduct demonstrations that illustrate scientific and mathematical concepts."

[ANS thanks the ARRL Letter Vol. 21, No. 28 for the above information.]

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SB SAT @ AMSAT $ANS-209.09
PROTOTYPE SINGLE LINE FORMAT OF SATELLITE STATUS

AMSAT NEWS SERVICE BULLETIN 209.09 FROM AMSAT HQ
SILVER SPRING, MD. July 28, 2002
To All RADIO AMATEURS
BID: $ANS-209.09

This is a trial version of a proposed single-line satellite status report proposed by Bob WB4APR. The goal is to provide an easy-to-read

format of the basic information for each satellite. The ANS Weekly Satellite Report will continue to carry full coverage. One proposal is that a summary report such as this be published on a regular basis such as monthly in one of the ANS publications.

The table below first appeared on the amsat-bb list on-line. The ANS editors will monitor the -bb list for feedback and questions. More data is planned to be added as this project proceeds.

SAT	CALL	UPLINK		DONWLINK		MODE	Altd
AO-7		145.9 -432.15	LSB	145.97 29.502	USB B	Analog	1450
AO10		435.03 -435.18	LSB	145.975-.825	USB B	Analog	9000
UO11		none	..	145.825	AFSK V	1200 ASCII	650
AO40		435.700	LSB	145.898	USB B	Beacon	9000
ISS		144.49	FM	145.800	FM V	Voice	370
ISS	RS0ISS	145.99	FM	145.800	AFSK V	1200 bd	370
RS13		145.96 -145.99	LSB	29.460-.50	USB A	Analog	950
UO14		145.975	FM	435.070	FM J	Voice	790
RS15		145.858-145.898	LSB	29.380 cntr	USB A	Analog	2000
AO16	PACSAT-1	145.90,92,94,96	Man	437.051	USB J	1200 PSK	810
LO19	LUSAT-1	145.84,86,88,90	Man	437.126	USB J	1200 PSK	805
IO26	ITMSAT-1	145.875,90,925,95	Man	435.822	USB J	1200 PSK	810
FO20		145.900-145.600	LSB	435.800-.900	USB J	Analog	1300
FO29		145.900-145.600	LSB	435.800-.900	USB J	Analog	1050
FO29		145.85,87,91	FSK	435.910	FSK J	9600 JD	1050
UO22	UOSAT5	145.900	FSK	435.120	FSK J	9600 BBS	760
KO25	HL02	145.980	FSK	436.502	FSK J	9600 BBS	760
AO27		145.85 inop	FM	436.798	FM J	Voice days	810
SO41		145.85	FM	436.775	FM J	Voice	790
OPAL	KF6RFX	437.100	FSK	437.100	FSK U	9600 digi	815
NO44	W3ADO-1	145.825 days only	AFSK	145.828	AFSK V	1200 bd	805
STARSHINE		145.825 inop	FSK	145.825	FSK V	9600 bd	440
NO45	KE6QMD	145.945 beeps only	AFSK	437.095	AFSK J	1200 bd	804

[ANS thanks Bob WB4APR for the above information.]

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SB SAT @ AMSAT $ANS-209.10
ANS NEWS IN BRIEF

AMSAT NEWS SERVICE BULLETIN 209.10 FROM AMSAT HQ
SILVER SPRING, MD. July 28, 2002
To All RADIO AMATEURS
BID: $ANS-209.10

** The RUDAK team is cutting back their activities slightly as the solar angles worsen. They will be ACTIVE on the following days/orbits:

DAY	ORBIT
July 28 [Sun]	800
July 29 [Mon]	801
Aug 1 [Thu]	805

On orbits NOT listed above, the command team will make every effort to have the RUDAK window turned off. -- Stacey W4SM

** During the 3 weeks beginning 29 July we should have several people on Naval Academy boats attempting to be tracked a few times a day via PCsat, ISS and UO-22 out in the Atlantic. --Bob WB4APR

** Information about the AMSAT-UK Space Colloquium can be found on-line

at http://www.uk.amsat.org -- Richard G3RWL

** The C programming language implementation of G3RUH's PLAN-13 keplerian propagator software has been posted at http://www.qsl.net/n1vtn . Feedback and bug reports are very welcome. --Edson N1VTN

** Smile. Russian space forces have deployed an optical tracking facility in Tajikistan for identifying space objects up to 40,000 kilometres (25,000 miles) from earth. --SpaceDaily

** Engineers are expected to start repairs next month on the grounded US space shuttle fleet to fix cracks in the fuel system, in the hopes of returning to space in the fall. --SpaceDaily

** Lots of folks on this downlink ... XM Satellite Radio ended the second quarter with more than 136,500 total subscribers, most from retail sales. -- SpaceDaily

** Update your keps. Russian officials have decided to perform a reboost of the International Space Station on Aug. 1, to put it at an optimal altitude for arrival of the next Progress unpiloted Russian supply spacecraft, and the next Soyuz crew return vehicle this fall. --NASA

** Space Adventures, a US company, is offering 600 trips to space in 2005-2006 on a small rocket-plane. Each plane fits one pilot and one tourist, who would pay $98,000 dollars for the experience of flying for one hour at altitudes up to 100 kilometers (62 miles). --SpaceDaily

** Hot rocks. Three young US students who worked as summer employees with NASA and an accomplice appeared before a magistrate Monday, charged with the theft of priceless lunar samples brought back to Earth by the Apollo missions. --SpaceDaily

** A recent bilateral agreement between Australia and Russia on technology safeguards for the Christmas Island spaceport project, to be run by the Asia Pacific Space Centre, has moved a step closer after talks in Moscow. --SpaceDaily

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ANS is still looking for additional Editors, if you are interested in joining
the team please contact Robin Haighton VE3FRH@amsat.org

73
from your ANS editors

This week's Editor
JoAnne Maenpaa WB9JEJ
wb9jej@amsat.org

Via the ans mailing list at AMSAT.ORG courtesy of AMSAT-NA.